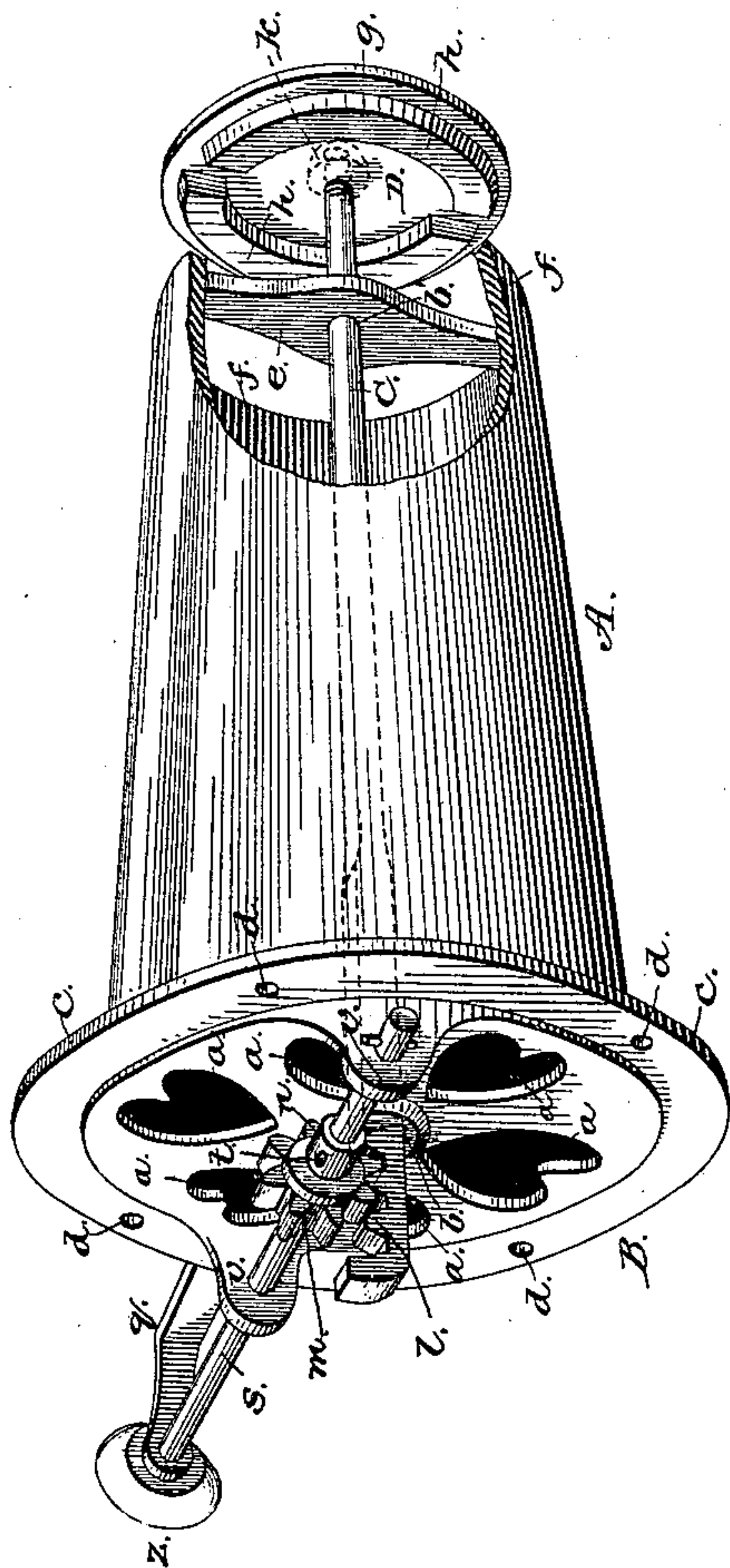


A. B. NOTT.
House-Ventilator.

No. 212,258.

Patented Feb. 11, 1879.



WITNESSES

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AARON B. NOTT, OF FAIRHAVEN, MASSACHUSETTS.

IMPROVEMENT IN HOUSE-VENTILATORS.

Specification forming part of Letters Patent No. **212,258**, dated February 11, 1879; application filed January 11, 1879.

To all whom it may concern:

Be it known that I, AARON B. NOTT, of Fairhaven, in the county of Bristol and State of Massachusetts, have invented a new and valuable Improvement in House-Ventilators; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, making a part of this specification, and to the letters and figures of reference marked thereon.

The drawing is a representation of a perspective view of my improved ventilator.

This invention has relation to ventilators for houses and apartments; and it consists in the construction and novel arrangement of a tapering tube having at its larger end or base a marginal fastening-flange and at each end a bearing for a central endwise-moving shaft or stem carrying at one end the ventilator valve or cover and provided at the other end with a rack and pinion, or equivalent means of operation, as hereinafter shown and described.

In the accompanying drawing, the letter A designates the tapering tube or chute, which has the form of a frustum of a cone, and is designed to be of sufficient length to extend through the wall of an apartment or building. The larger end of this tube is provided with a plate, B, having openings *a* for the passage of the air, and a central bearing, *b*, for the operating-stem C. This plate is designed to extend beyond the outer circumference of the larger end of the conical tube and to form a fastening-flange, *c*, therefor, suitable holes *d* being provided in this flange for the fastening nails or screws. The smaller end of the conical tube is also open, and is provided with a cross-bar, *e*, in which is a bearing-aperture, *b'*, for the other end of the stem.

The edge or margin of the smaller end, *f*, of the tube forms a close joint with the valve or cover D when the latter is brought in contact with the margin. The valve or cover

D is also flanged at *g*, and is made sufficiently heavy, by means of its body-pieces *h*, to keep its form and assist in keeping it in position.

The body-pieces *h* are usually separated, to allow for the cross-bearing *e* at the end of the tube.

The valve is screwed on the end of the stem C, sufficient body for tapping being provided by means of a central exterior swell, *k*. The other end of the stem is provided with a rack, *l*, on one side. This rack portion is rectangular in cross-section, and passes through the rectangular aperture *b* in the center of the end plate, B. It engages a pinion, *m*, which is provided with a sleeve, *n*, whereby it is connected to a shaft, *s*, so as to be slipped out of engagement with the ratchet when required, a small pin, *t*, passing through the sleeve and shaft, serving to key them together.

The shaft *s* has its bearings in lugs *v* on opposite sides of the plate B, and should extend far enough for its handle end *z* to be within reach.

A brace-bearing, *q*, usually connects the handle end of the shaft and the margin of plate B.

In order to use the ventilator, a hole is made through the wall, and the tube inserted with the smaller end outward. The flange of the larger end is then secured to the inside wall, and forms a sufficient finish.

The valve is opened to the required degree, or closed altogether, by turning the shaft-handle *z*.

Sometimes it may be advisable to put a spiral spring on the stem, in order to give the valve more freedom of movement; and above chandeliers, and in other places, the rack-and-pinion movement may be replaced with a screw. This movement is not so rapid as the rack-and-pinion, but it facilitates the attachment of a hook to the plate B for suspending a chandelier, the warm air from which, passing upward through the tube, will aid the ventilation of the lower apartment and assist in raising the temperature of the room above.

I am aware that it is common to introduce

tube-ventilators through the walls of apartments and buildings; hence I do not broadly claim such invention.

What I claim, and desire to secure by Letters Patent, is—

The ventilator consisting of the tapering tube A, its open base-plate B, having the air-holes *a* and the central bearing *b*, the cross-bar bearing *c b'* at the smaller end of said tube, the end valve, D, and its operating-stem

C, reciprocating in the bearings *b b'*, and the rack and pinion, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

A. B. NOTT.

Witnesses:

CHAS. DREW,
FRANK A. RAND.